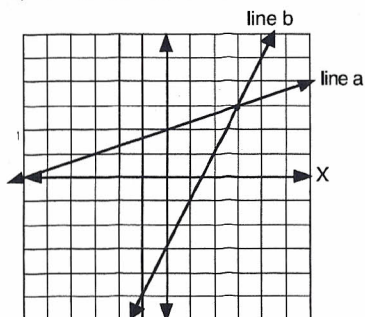


13E

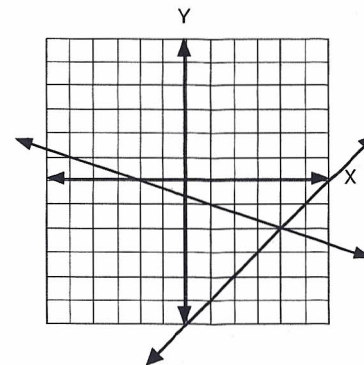
- 1) on the graph
- 2) on the graph
- 3) (3, 3)
- 4) $2 = 5 + b$, $b = -3$
- 5) $Y = X - 3$, $X - Y = 3$



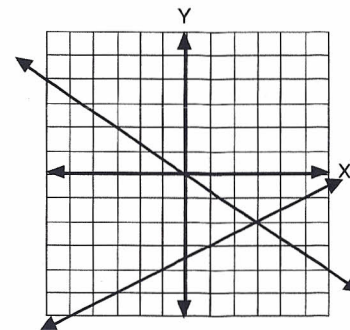
- 6) $m = \frac{4-5}{1-3} = \frac{-1}{-2} = \frac{1}{2}$
- 7) $4 = 1/2(1) + b$, $b = 3 \frac{1}{2}$
- 8) $Y = 1/2X + 7/2$, $X - 2Y = -7$
- 9) $m = 5/4$
 $-2 = 5/4(-2) + b$
 $-2 = -5/2 + b$, $1/2 = b$
- 10) $Y = 5/4 X + 1/2$, $-5X + 4Y = 2$ or $5X - 4Y = -2$
- 11) $3Q + 7 + 2Q - 5 - 4Q = -Q + 1 + 4 + Q$
 $Q + 2 = 5$, $Q = 3$
- 12) $T + 4 + 3T - 6 - 2T = 2T + 5 - 4T - 1 + 2T$
 $2T - 2 = 4$, $2T = 6$, $T = 3$
- 13) $-2.8P + .06P = 5.72$
 $-280P + 6P = 572$
 $-274P = 572$, $P = -572/274$ Reduced: $-2 \frac{12}{137}$
- 14) $32Y - 8Y = -36$
 $24Y = -36$
 $Y = -36/24 = -3/2$
- 15) $.03 \frac{3}{4} X - .75 = 0$
 $3(3/4)X - 75 = 0$
 $9/4X = 75$
 $X = 75(4/9) = 300/9 = 100/3 = 33.33$
- 16) $4 \frac{2}{3} + 3 \frac{1}{3}X = -3$
 $14/3 + 10/3X = -3$, $14 + 10X = -9$
 $10X = -23$, $X = -2 \frac{3}{10}$
- 17) 8:20 to 2:40 is $6 \frac{1}{3}$ hours
 $335 \div 19/3 = 335 \times 3 / 19 =$
 52.9 miles/hour (rounded)
- 18) $335 \div 13.4 = 25$ mpg
- 19) XD, XE, XF (X times next letter in alphabet)
- 20) 4.75, 5, 5.25, 5.5, 5.75 (add .25 each time)

14A

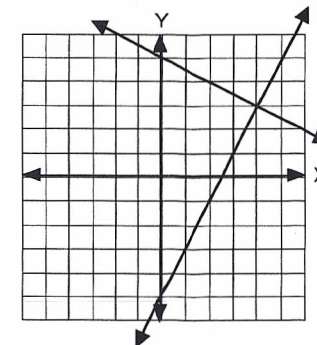
- 1) (4, -2)
- 2) $(Y + 6) + 3Y = -2$,
 $4Y = -8$, $Y = -2$
- 3) $X = -2 + 6 = 4$
 $X = 4$



- 4) (3, -2)
- 5) $2(7 + 2Y) + 3Y = 0$
 $14 + 4Y + 3Y = 0$
 $14 + 7Y = 0$
 $14 = -7Y$
 $Y = -2$
- 6) $2X + 3(-2) = 0$
 $2X - 6 = 0$
 $2X = 6$
 $X = 3$



- 7) (4, 3)
- 8) $X + 2(2X - 5) = 10$
 $X + 4X - 10 = 10$
 $5X = 20$
 $X = 4$
- 9) $Y = 2(4) - 5$
 $Y = 8 - 5$
 $Y = 3$



- 10) $2X - 3(X + 3) = -4$ $X = -5$ $(-5, -2)$
 $2X - 3X - 9 = -4$ $Y = -5 + 3$
 $-X = 5$ $Y = -2$

14B

1) $(-1, 2)$

2) $Y = (-Y + 1) + 3$
 $2Y = 4, Y = 2$

3) $2 = X + 3$
 $X = 2 - 3, X = -1$

4) $(5, 6)$

5) $Y = -X + 11$
 $X = -Y + 11$
 $2(-Y + 11) - Y = 4$
 $-2Y + 22 - Y = 4$
 $-3Y = -18$
 $Y = 6$

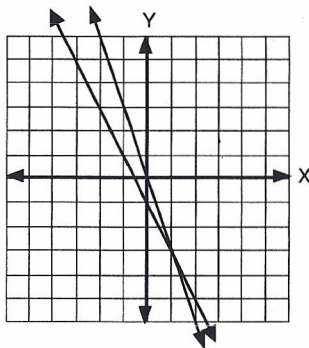
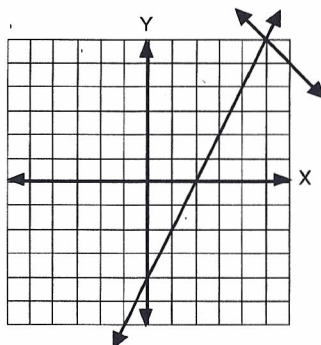
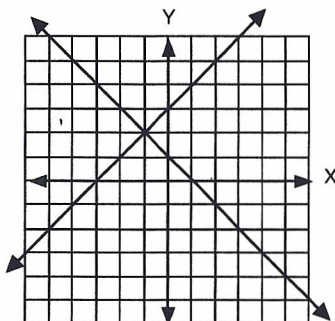
6) $6 = -X + 11$
 $-5 = -X$
 $5 = X$

7) $(1, -3)$

8) $Y = -2(-1/3Y) - 1$
 $Y = 2/3Y - 1$
 $1/3Y = -1$
 $Y = -3$

9) $-3 = -3(X)$
 $1 = X$

10) $2X + 3(5X - 30) = 29$
 $2X + 15X - 90 = 29$
 $17X = 119$
 $X = 119/17$
 $X = 7$
 $5(7) - Y = 30$
 $35 - Y = 30$
 $Y = 5$
 $(7, 5)$



14C

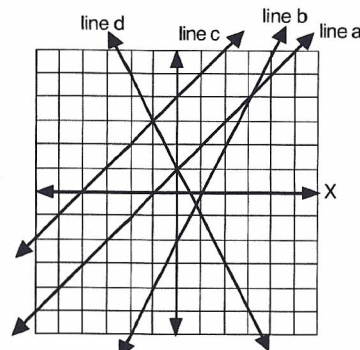
1) $(3, 4)$

2) $X + 1 = 2X - 2$
 $3 = X$

3) $Y = 3 + 1 = 4$

4) $(-1, 3)$

5) $X + 4 = -2X + 1$
 $3X = -3, X = -1$



6) $Y - (-1) = 4, Y + 1 = 4, Y = 3$

7) $m = \frac{3-5}{1-4} = \frac{-2}{-3} = \frac{2}{3}$

8) $3 = 2/3(1) + b, 3 - 2/3 = b, 2 1/3 = b, b = 7/3$

9) $Y = 2/3X + 7/3, 2X - 3Y = -7$

10) $m = -4/3$

11) $2 = -4/3(2) + b, 2 = -8/3 + b$
 $b = 2 + 8/3, b = 4 2/3$

12) $Y = -4/3X + 4 2/3$
 $Y = -4/3X + 14/3, 4X + 3Y = 14$

13) 1, 4, 9, 16, 25, 36, 49, 64, 81, 100,
121, 144, 169, 196, 225
 $1^2, 2^2, 3^2, 4^2, 5^2, 6^2, 7^2, 8^2, 9^2, 10^2,$
 $11^2, 12^2, 13^2, 14^2, 15^2$

14) 820 miles

15) $820 \div 50 = 16.4$ hours, $16 + 4/10, 16 + 24/60$
 $16:24 + 7:35 = 23:59, 11:59$ PM

16) $820 \div 25 = 32.8$ gallons,
 $32.8 \times 1.269 = \$41.62$

17) .923

18) $2A^2 - A^2 + 3A$

19) Prime

20) 12

14D

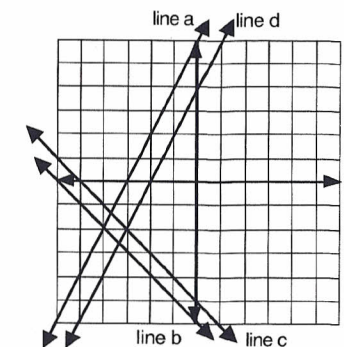
1) $(-4, -2)$

2) $2X + 6 = -X - 6$
 $3X = -12, X = -4$

3) $-4 + Y = -6, Y = -2$

4) $(-3, -2)$

5) $-X - 5 = 2X + 4$
 $-3X = 9, X = -3$



6) $Y - 3 = -5, Y = -2$

7) $\frac{4-0}{-2-0} = -2$

8) $0 = -2(0) + b, 0 = b$

9) $Y = -2X, 2X + Y = 0$

10) $m = 3/4$

11) $2 = 3/4(2) + b, 2 = 6/4 + b$
 $2 - 3/2 = b, b = 1/2$

12) $Y = 3/4X + 1/2, 3X - 4Y = -2$

13) 1, 4, 9, 16, 25, 36, 49, 64, 81, 100,
121, 144, 169, 196, 225
 $1^2, 2^2, 3^2, 4^2, 5^2, 6^2, 7^2, 8^2, 9^2, 10^2,$
 $11^2, 12^2, 13^2, 14^2, 15^2$

14) 380 miles

15) $380 \div 50 = 7.6$ hours, $7 + 6/10, 7 + 36/60$
 $7:36 + 6:14 = 13:50, 1:50$ PM

16) $380 \div 25 = 15.2$ gallons,
 $15.2 \times 1.199 = \$18.22$

17) .321

18) $A + 3B - 9 = 2C$

19) $5 \times 87, 5 \times 3 \times 29$

20) 8

14E

1) $(-5, 1)$

$$\begin{aligned} 2) \quad -X - 4 &= X + 6 \\ -10 &= 2X \\ X &= -5 \end{aligned}$$

$$\begin{aligned} 3) \quad -5 + Y &= -4 \\ Y &= 1 \end{aligned}$$

4) $(-1, 0)$

$$\begin{aligned} 5) \quad 4X &= 4 = -2X - 2 \\ 6X &= -6 \\ X &= -1 \end{aligned}$$

$$\begin{aligned} 6) \quad Y - 4(-1) &= 4 \\ Y + 4 &= 4 \\ Y &= 0 \end{aligned}$$

$$7) \quad m = \frac{-2 - 1}{3 - (-1)} = \frac{-3}{4}$$

$$\begin{aligned} 8) \quad 1 &= -3/4(-1) + b \\ 1 &= 3/4 + b \\ 1/4 &= b \end{aligned}$$

$$\begin{aligned} 9) \quad Y &= -3/4X + 1/4 \\ 3X + 4Y &= 1 \end{aligned}$$

10) $m = 3/5$

$$\begin{aligned} 11) \quad -2 &= 3/5(-3) + b \\ -2 &= -9/5 + b \\ -2 + 1\frac{4}{5} &= b = -1/5 \end{aligned}$$

$$\begin{aligned} 12) \quad Y &= 3/5X - 1/5 \\ 3X - 5Y &= 1 \end{aligned}$$

$$\begin{aligned} 13) \quad &1, 4, 9, 16, 25, 36, 49, 64, 81, 100, 121, 144, 169, 196, 225 \\ &1^2, 2^2, 3^2, 4^2, 5^2, 6^2, 7^2, 8^2, 9^2, 10^2, 11^2, 12^2, 13^2, 14^2, 15^2 \end{aligned}$$

14) 804 miles

$$\begin{aligned} 15) \quad 804 \div 50 &= 16.08 \text{ hours, } 16 + 8/100, 16 + 5/60 \\ 16:05 + 4:42 &= 20:47, 8:47 \text{ PM} \end{aligned}$$

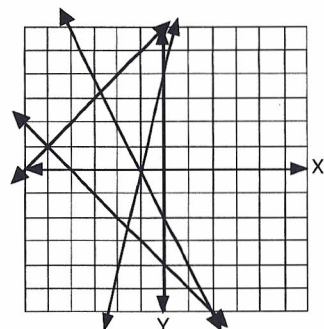
$$\begin{aligned} 16) \quad 804 \div 25 &= 32.16 \text{ gallons,} \\ (32.16)(1.289) &= \$41.45 \end{aligned}$$

17) .368

18) $9/10 = 90/100 = 90\%$

$$\begin{aligned} 19) \quad (1 - 3) - 3 &= 1 - (2 - 3) \\ -1 - 3 &= 1 - (-1) \\ -4 &\neq 2 \\ \text{No} \end{aligned}$$

20) 3.888

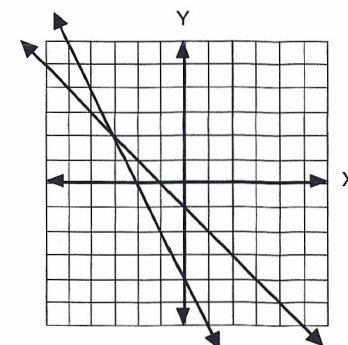


15A

1) $(-3, 2)$

$$\begin{aligned} 2) \quad X + Y &= -1 \\ -(2X + Y &= -4) \\ -X &= 3 \\ X &= -3 \end{aligned}$$

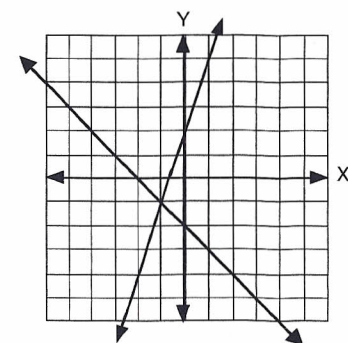
$$\begin{aligned} 3) \quad -3 + Y &= -1 \\ Y &= 2 \end{aligned}$$



4) $(-1, -1)$

$$\begin{aligned} 5) \quad X + Y &= -2 \\ (3X - Y &= -2) \\ 4X &= -4 \\ X &= -1 \end{aligned}$$

$$\begin{aligned} 6) \quad -1 + Y &= -2 \\ Y &= -1 \end{aligned}$$



7) $(4, -1)$

$$\begin{aligned} 8) \quad X - Y &= 5 \\ +(2X + Y &= 7) \\ 3X &= 12 \\ X &= 4 \end{aligned}$$

$$\begin{aligned} 9) \quad 4 - Y &= 5 \\ 4 - 5 &= Y \\ -1 &= Y \end{aligned}$$

$$\begin{aligned} 10) \quad 4X + 6Y &= 36 \\ -(4X + Y &= 6) \\ 5Y &= 30 \\ Y &= 6 \end{aligned}$$

$$\begin{aligned} 4X + 6 &= 6 \\ 4X &= 0 \\ X &= 0 \end{aligned}$$

$(0, 6)$

